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ABSTRACT

This report describes the PlayWrite Program, which was developed in the Montville Township School District, New Jersey, to encourage children in grades K-6 to write. The primary objectives of the program are to increase students' motivation to write; to improve their writing skills through the process of brainstorming, composing, revising, and editing; to help students learn how to generate topics for writing; to increase their self-confidence in conversational fluency; and to expose students to word processing as an aid to written composition. The report contains a review of the literature for language and nonverbal learning, cooperative learning, and computer-assisted instruction; a description of the program; sample activities; and evaluation design and results. Thirty-seven references are appended. (MS)

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PLAYWRITE

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New Jersey State Department of Education

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Student and teacher materials for the PlayWrite Program are available from the Montville Township School District. For more information or to acquire materials, contact:

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PlayWrite

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1987 Governor's Teacher Grant Program
New Jersey Department of Education
Saul Cooperman, Commissioner
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OFFICE OF THE COMMISSIONER

Commissioner's Statement

Colleagues are frequently cited by teachers as a rich source of new ideas and effective methods that become incorporated into their own instructional practices. Recognizing the potential benefits of such sharing, Governor Thomas H. Kean established the Governor's Teacher Grant Program in 1985. Governor's Teacher Grants provide selected teachers with funds to prepare materials that will enable their instructional practices to be shared with others.

Now, with the conclusion of the first group of grants which were awarded in 1986, these teacher developed materials have been completed. In making these programs available to educators throughout the state, we give recognition to the important contribution that teachers make to school improvement. We are indeed grateful to those dedicated teachers selected as 1986 Governor's Teacher Grant recipients.

Saul Cooperman
Commissioner

SC/JB/RS/dm:2/3211G

TABLE OF CONTENTS

I. OVERVIEW.....Page 5

II. REVIEW OF THE LITERATURE.....Page 6

Language and Nonverbal Learning.....Page 6

Cooperative Learning.....Page 9

Computer-Assisted Instruction.....Page 11

III. DESCRIPTION OF THE PROGRAM.....Page 15

Program Objectives.....Page 15

Instructional Materials.....Page 16

Assessing Student Performance.....Page 17

IV. SAMPLE ACTIVITIES.....Page 19

V. EVALUATION DESIGN AND RESULTS.....Page 21

VI. BIBLIOGRAPHY.....Page 24

OVERVIEW OF THE PLAYWRITE PROGRAM

The ability to write is highly valued in our society. Recent high school graduates exhibit many deficiencies in their writing abilities, yet writing in the elementary classroom has been de-emphasized for various reasons.

The PlayWrite Program encourages children to write. It uses nonverbal strengths through manipulation of materials and an emotional link to a model created by the child as springboards for story-writing. In addition, it incorporates the highly motivational teaching techniques of nonverbal learning, cooperative teaching, and computer-assisted instruction.

PlayWrite was developed for use in the elementary school classroom, grades kindergarten through six, although it is applicable to any grade level. While it appeals to children of any learning modality, it is especially geared to those students with holistic or right-hemispheric specialization. Children with right-hemispheric learning preferences are often classified as Learning Disabled. This may be due to the fact that most areas of language are located in the left hemisphere. We expect children to deal with these language areas daily in the classroom. With our overabundance of verbal teaching methods, we teach to the student with a dominant left hemisphere. The PlayWrite program is designed to provide much needed nonverbal language experiences.

Materials needed to run the program are flexible and will depend on availability. Any material that a child can manipulate to create a model can be used. Construction toys lend themselves well; however, objects found in the home, school, and natural outdoor environments work equally well. A computer is optional, but helpful.

The primary objectives of the PlayWrite Program are to increase motivation to write; to improve writing skills through the process of brainstorming, composing, revising, and editing; to help students learn to generate topics for writing; to increase self-confidence in conversational fluency; and to expose students to word processing as an aid to written composition.

REVIEW OF THE LITERATURE

Language and Nonverbal Learning: The PlayWrite Connection

Elliot Eisner (1981) maintains that sensory deprivation is a glaring cause of illiteracy in our schools. His contention is that children who have not learned to see mentally and explore the forms of nature, art, and science will not be able to write, simply because they have nothing to say.

In order to promote early written literacy, the environment must offer a field of experimentation for the learner. Materials should be manipulated to yield visual and motor feedback. According to Piaget, children learn by doing: by interacting with their environment, and constructing mental schema of how the physical world operates.

Through such activities as cooking, cleaning, and sorting dishes, modeling with clay, building with blocks, playing house, and hundreds of other visual/motor activities, children form schema and learn the cognitive skills of comparing, contrasting, categorizing, sequencing, and evaluating. Eisner, as well as Piaget, has suggested that a conceptual base for words and verbal expression needs to be developed before children come to the experience of reading and writing. In fact, we do not teach children skills such as classifying through paper-and-pencil activities. Usually, children bring these conceptualization skills to the task on the printed page.

The younger the child, the more likely that language experiences (and later literary experiences) will have meaning based on concrete happenings. When words and sentences are used to describe concrete experience, nonverbal, right-hemisphere conceptualizations provide the referents for the language meaning. Therefore, right-hemisphere stimulation during the early years of child development and primary grade schooling may be the cornerstone for later literacy learning in verbal modes during the higher grade levels (Sinatra 1983).

Until the age of formal schooling in the young child, each hemisphere in the brain reacts to and sorts out the world with equal success. Until about the age of four, the right hemisphere is about as proficient at

handling language as is the left (Gazzaniga 1977). The more the language itself assumes a commanding role in the young child's thoughts and actions, the more likely that full lateralization will occur. In other words, the left hemisphere will dominate in language expression while the right hemisphere excels in Gestalt, holistic, and visual/spacial processing.

The electroencephalograph (EEG) has been used in two major studies to measure the actual engagement of the two hemispheres during a variety of natural cognitive tasks (Galin 1979). Glassner (1980) looked at the process of composition with older students to determine which hemisphere was engaged during two modes of writing: one focusing on the writer's ability to convey a message, and the other focusing on his or her thoughts about a personal experience. He found that while the writing product is in a linear form, its processes incorporate nonlinear, nonverbal forms of thought.

Knowledge of brain functioning enables one to see the importance of right-hemisphere stimulation for language learning. Most language arts curricula, however, are strongly left-hemisphere oriented.

An exception is that of Goodman (1979) and Shuy (1981). This type of holistic process-oriented approach to reading and writing offers a real opportunity for dual hemispheric involvement in language learning. During language involvement in whole pieces of discourse (as occurs in writing, theme and poetry readings, and experience-type language stories) stored sensory experiences and nonverbal schemata are aroused in the form of imagery.

Research implies that interhemispheric integration can be facilitated when the right hemisphere is given a commanding role in stimulating the verbal. The less nonverbal experience a child has had, the less schemata will be formed. It follows, then, that there will be less verbal re-enactment of those experiences. Nonverbal experiences need to be associated with various methods of representation (drawing, painting, body movement, music, maps, sculpture) to allow for richer verbal accounting of the experiences.

Research also indicates children have differing styles of learning. When the curriculum is modified to adapt to the learners' preferences, significant

increases can occur in the learning (Douglas, 1979; Trautman, 1979).

Sperry (1973) notes that differential strengths between left and right-hemisphere processing modes in different individuals account for the variation in human intellect: from mechanical or artistic geniuses who have trouble expressing themselves in speech or writing, to the highly articulate who can "think aloud".

In our language arts teaching, we cultivate verbal growth, but do not especially cultivate or reward the nonverbal mode. It is not uncommon to praise inventors, artists, and musicians long after their schooling has ended; their nonverbal strengths going unnoticed (and certainly unrewarded) in the classroom.

Sinatra (1983) suggests we broaden our educational horizons and re-admit the nonverbal mode of thought that is an essential part of a child's life. In so doing, we will re-establish the influential role of the right hemisphere in creativity and in language development.

Cooperative Learning

The concept of cooperative learning dates back to the one-room schoolhouse where older children tutored those in the younger grades. Today, there are an estimated 4,000 peer helper programs throughout the country.

Cooperative learning means children teaching, helping, and leading other children. Peer helpers turn peer pressure into a positive force, enabling students to help each other cope with academic, personal, and social issues. According to Bowman (1985), many times children seek help from other children before they turn to adults.

A good cooperative learning program should reach out to a variety of students, and the helpers themselves should reflect that diversity. Good programs encourage participation by students on all academic levels, not just "stars".

The language arts curriculum in the elementary school, and particularly the area of writing, affords great opportunity for peer helpers. Calkins (1978) describes a personal experience which is all too common in the classroom. As a young writer, she had spent many hours carefully writing and revising her "muskrat" paper. The paper was handed to the teacher and went into a box with twenty-three other stories. It sat on the desk for a whole week before it was finally returned to her with a robin sticker on the cover. When questioned about the story, the teacher replied that it was a "B" story. Calkins was never asked about her muskrat. She certainly didn't feel like an author--or a robin.

A teacher herself today, Calkins offers her students not stickers or grades, but readers. Her class in the Center School of Middlefield, Connecticut, is actively engaged in a cooperative learning program. As part of their program, students help one another with their writing and revising. They help each other search through trial and error for the language which conveys what they see, feel, and hear. They know there is a time to question, to extend, to test, and to appreciate.

Previously described is a situation in which a teacher did not provide the necessary feedback about a piece of student writing. Correcting and editing the large number of student papers that must be assigned if

writing is to be taught with any degree of success is no easy task. It is Osborn's contention (1980) that many teachers give up in frustration and teach the parts of speech or some other language mechanic tool. The fact still remains, though, that we learn to write by writing. Children of all ages need to write and receive feedback about their writing every day.

Osborn suggests "writing families" to make this possible. Writing families are small groups of children who meet to evaluate and share each other's writings. The method works on a five-day cycle. The first day is initially spent with the teacher outlining and or providing motivation for purposeful writing; followed by student writing. Completed stories are read aloud, since professional writers have found this an invaluable tool for picking up inconsistencies and refining ideas.

Crowhurst (1979) also describes the problem of the amount of writing students do in school. She addresses the problem of the overwhelming amount of paperwork teachers must mark if students do the amount of writing that must be done in order for writing skills to develop. Her answer to the problem is to develop students' ability to respond to the writing of their peers. If students can make useful comments about one another's writing, the teacher's "burden" is lessened, and many additional benefits accrue. Crowhurst successfully uses the techniques of James Moffett in her writing workshops in three elementary classrooms in Manitoba, Canada.

Moffett (1976) and Wagner (1976) describe a writing workshop as any small group of students who exchange or read aloud their papers in order to try out their compositions and make suggestions to each other for improvement.

Students' reactions to the workshop were gauged from teachers' observations and from students' responses to a questionnaire given after several weeks' experience with the program. The three teachers involved reported that students liked writing for their peers and seemed motivated to do good work. Some students indicated they would like to do more writing. Length of compositions increased noticeably for a number of students. Students enjoyed responding to the work of their peers. Some even commented that they got good ideas for writing from the compositions of their peers.

The benefits of a writing workshop utilizing cooperative learning can be briefly summarized as follows: lightened teacher marking-load and increased volume of assigned writing, increased student motivation to write, writing is for a real audience other primarily than the teacher, prompt varied feedback as well as greater feedback, and practice is provided in critical reading for a real purpose.

Computer Assisted Instruction

To date there has been little systematic research about electronic learning. Most of what we know presently is anecdotal. It seems, however, that electronic learning (using television, computers, or videodisks) requires more sensory interaction than does print learning. This sensory interaction is based on the ability of electronic technology to produce images, sound, stimulation, and dynamic new graphics that can enhance learning.

One of the few questions about electronic learning that can be answered by systematic research is that computers do assist learning (Ragosta 1982). A long-term study of CAI (computer assisted instruction) conducted by the Educational Testing Service found that students learned more quickly when they were exposed to computer assisted learning than they did in traditional classroom instruction. The computer assisted instruction contained a lot of drill and practice. According to the ETS study, this improves both motivation and attention (Forman 1982).

There are no systematic studies proving that computers motivate pupils to learn, but there are hundreds of anecdotal and observational reports that children, when exposed to learning from computers, take to it "like ducks to water". Almost all children seem to enjoy working with computers and software. A pilot study in the Electronic Learning Lab at Teachers College shows that student attention, defined as time-on-task, was higher with computers than it was in the classroom (Teachers College 1982).

Bork (1980) and Malone (1981) have studied what it is that makes interactive technology so attractive to children. Some of the characteristics of software that seem to be important are the idea of challenge, the involvement of fantasy, and the game format. The level

of challenge is also important since the pupil needs to be kept alert in order to learn.

A pilot study at the Electronic Learning Lab found that pupils involved with the computer ask more questions than they do in the traditional classroom. This goes against the idea that children simply sit in front of the computer like robots. On the contrary, they are active and full of questions: educationally desirable characteristics of computer learning.

One thing seems to be clear about electronic learning: children will make a beeline toward the technology if given the opportunity. There is something inherently attractive about computer technology to this generation of children, and it cannot be ignored educationally.

The socialization aspect of computer-assisted instruction also has educational implications. Studies at ELL found that children who work around computers tend to talk to each other more than they do in the classroom, and they tend to discuss what is to be learned rather than out-of-classroom matters.

While no one can say what computer technology can really do in the field of education, we can predict that this new emphasis will place new demands on the learner (Burton 1979). One of these will be imagery. Children will rely more on imagery comprehension than word comprehension (White 1984). At any rate; schools, learning, and teaching will never be the same (White 1983).

Word Processing Aids Writing Instruction

Researchers and teachers are becoming very interested in the use of word processing as an aid to writing instruction because of its potential for encouraging students to revise their writing more willingly. Research has shown that revision is one of the most important parts of the composing process, but students don't receive much instruction in how to do it, and they don't revise very much (Cronnel 1981). Word processors allow students to add new text, delete parts or all of it, insert a word or line, or rearrange text without rewriting the entire composition. Students can save their text for further revision at a later time and print it when they are satisfied with the final version (Bradley 1982).

The computer itself doesn't teach a new attitude about revision, but it does make revising a lot easier. If children revise just because they are asked to, they won't find out what good writing is all about. Successful writing requires a sense of purpose and vision of an audience. Children need to learn that revising is necessary because they haven't gotten across their ideas to a particular audience. Getting to the point at which children know what they mean and want to write it requires a good teacher and a sense of audience (Branan 1984).

Donald Graves, a researcher, author, and professor of education at the University of New Hampshire, explains how computers can make a difference. He contends that what limits children when writing with pen and paper is the feeling that the words they put down are down forever. They don't see the imbalance between what they had intended to say and what's on the paper.

Teachers and researchers who observed children using word processors consistently report positive results. Kleiman and Humphrey (1982) reported that learning disabled children seven to sixteen years of age, many of whom had refused to do any kind of writing, began writing enthusiastically when permitted to use word processors. When word processors were introduced in the East York School in Canada, children began to "write more, edit more, and produce better compositions." The change occurs when children become familiar with the capabilities of the word processor.

Hennings (1981) suggested that word processors could be an effective tool in the language experience approach to the improvement of reading and writing skills. LEA is an attempt to bring oral and written language together in the instructional program. It is based on the philosophy that children can learn to write and read material more easily if it is relevant to them. In a study with first graders, the researcher typed dictated stories into a microcomputer (as opposed to the traditional wall chart method). Aside from the novelty of the computer, a significant factor in the children's enjoyment of the lesson was the speed at which their dictation could be transcribed. With the traditional method, words are slowly transcribed, creating boredom and fatigue. Stories were often ended before they had reached logical conclusions with sentences such as "And that was the end." The

capability of the computer to produce immediate hard copies for distribution was also a decided advantage.

Computers and Cooperative Learning

Dickson and Vereen (1983) hold that there are a number of reasons why educators should consider having more than one student use a computer at a time. If computers are used by two students simultaneously, total access time is doubled. In addition, students working in pairs may receive social and cognitive benefits from their interactions.

Research on the cognitive benefits of computer-assisted instruction suggests that pairs of students learn as much or more than students working alone (Golton, 1975; Okey and Majer, 1976; Sutter and Reid, 1969). The potential cognitive benefits of cooperative use of computers are also supported by research on learning in small groups in the classroom. This research has shown that under certain conditions, students learn more when working in groups than when working alone. Salvin (1980) reviewed twenty-three studies of cooperative learning and concluded that cooperative learning methods generally result in increased student achievement. Salvin's conclusions are supported by Sharan (1980) who also reviewed a broad range of cooperative learning approaches to education and found that while different approaches yielded different outcomes, cooperative approaches usually yielded cognitive benefits. Therefore, we may be optimistic that having students work together on the computer will result in greater cognitive benefits.

Webb (1982) discusses a number of mechanisms by which interaction is thought to affect cognitive processes. The act of verbalizing material, or explaining it to someone else, is thought to lead to "cognitive restructuring" on the part of the student doing the teaching. Research also supports the view that verbal interaction between students leads them to experience conceptual conflict with other students, forcing them to examine their own understanding and seek resolution of conflicting viewpoints.

Even more important than cognitive benefits may be the social benefits of working together on computers. Salvin (1980) concluded that cooperative learning methods also resulted in mutual concern among students, positive race relations, and increased student self-esteem. A study by Hawkins and Sheingold (1982) suggests that the microcomputer exerts a broad and largely favorable influence on social interactions in classrooms.

DESCRIPTION OF THE PROGRAM

Program Objectives

The purpose of the PlayWrite Program is to offer the student nonverbal language experiences. This is accomplished by having the student build a model which is then used as a springboard for story writing. Once a student has made a model, an emotional link has been established between the creator and the creation. It is this element of personal involvement that makes writing more meaningful to the individual.

* The primary objective of the program is to motivate students to write. Motivation is increased through an emotional link created between student and model. Every student becomes an immediate authority on his or her own model, simply because he or she has created it.

* Students also improve writing skills by learning to use the process of brainstorming, composing, revising, and editing. This process has been deemed most effective in the teaching of writing skills by the US Department of Education (1986).

* Students gain facility in generating their own topics for writing. Group "brainstorming" sessions and discussions help teach students to find topics on their own, rather than rely on teacher-assigned topics.

* Conversational fluency and self-confidence improve as a result of discussions and story sharing.

* Social skills are enhanced through the cooperative learning (peer teaching) approach to teaching. Students assist one another during writing workshops and word processing activities.

* Word processing is introduced as an aid to written composition if a computer is available.

INSTRUCTIONAL MATERIALS AND EQUIPMENT

Manipulative materials are the major component of this program. Selection of materials will depend upon availability. In the initial field testing of the program, commercially available manipulative construction toys were used (Legos). Construction toys from other manufacturers will lend themselves well also.

Basically, anything that is three-dimensional and can be "manipulated" can be used. Home-made dough from many of the available recipes can be mixed for use right in the classroom.

Recyclable items are also appropriate for use. Styrofoam packing materials may be glued together to form sculptures. Cans and other containers can be combined to create totem poles. Newspapers form the basis of papier-mache structures.

Articles around the home and school environment are also possibilities for good manipulative materials. Ice cream sticks, toothpicks, and marshmallows make interesting models.
Fabric scraps, bits of yarn, and glossy pictures from discarded magazines can be combined to make vibrant collage-style creations.

The natural outdoor environment also provides excellent materials. Projects can be made by combining items such as pebbles, feathers, seed pods, leaves, and twigs found on a nature walk. Even "mudpies" should not be discounted.
Students themselves usually supply the ideas for building materials.

A computer is beneficial, but not integral to the program. In the initial field testing of PlayWrite, students had access to an Apple IIe computer with a printer and word processing software. While there are definite benefits in providing students with opportunities to use a computer for their story writing, the program should not be affected if one is not available.

ASSESSING STUDENT PERFORMANCE

PlayWrite is a process approach to writing. By nature of a process approach, children will be in different stages of writing at different times. Not only do children need to learn to take responsibility for their learning, but the teacher needs a management system that is meaningful. Observation and record keeping are two ways in which a teacher can determine which students need help at a particular time.

WRITING FOLDERS: Record keeping is easily accomplished through the use of individual student writing folders. The writing folder consists of both record sheets for summary information and the student's actual writings.
Summary information might be listed within the folder in the following categories: skills needing reinforcement, skills mastered, areas of interest for future writing, story titles, and a record of which stories have been "published".
Completed stories are kept in the folders as a record of work accomplished. Students are able to help with management of their folders by logging and filing their stories. A record of this type is both simple and easy to keep. It is meaningful to both teacher and student and can also help parents see and understand their child's growth as a writer.

OBSERVATION: Observation is another useful method of monitoring progress. Observing from a "distance", a teacher can see how a student positions a paper while writing, how resources are used, and how much is being written. "Close-up" observation involves studying one child to see how he or she goes about the composing process. By sitting next to a child who is writing, a teacher can learn how the switch is made from speech to print, how the page is used, what problems the child encounters during the composing process, how the child deals with those problems, and what problems exist that are not obvious to the child. It is important that the teacher reviews the child's folder prior to the observation.

MEASURING MOTIVATION TO WRITE: The main focus of PlayWrite is to motivate students to write. Output, or the amount a student writes, is an indication of interest and motivation. There are two ways in which a written product may be measured. The teacher may choose to simply count the number of words a student writes or monitor and assess "thought-units" as a method of checking student progress. A thought-unit (T-unit) is defined as a segment of meaningful expression. It contains an identifiable verb and subject that can stand alone. It is a complete sentence. In scoring thought-units, incorrect punctuation, spelling, and capitalization are disregarded; and each unit is counted as though it were done properly.

ACTIVITY: THE TEACHING MACHINE

All PlayWrite lessons follow a basic plan for teaching writing. The four steps are:

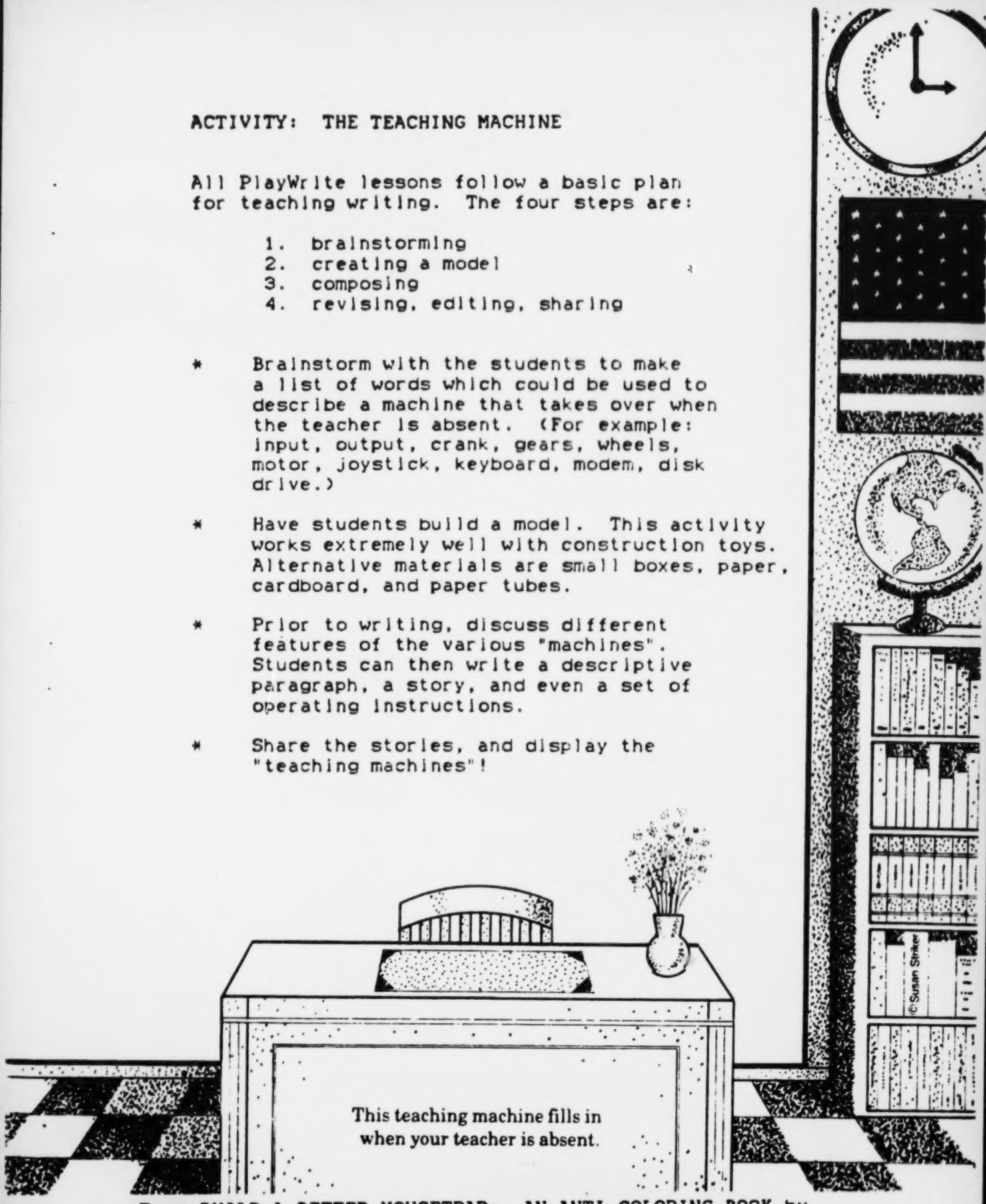
1. brainstorming
2. creating a model
3. composing
4. revising, editing, sharing

* Brainstorm with the students to make a list of words which could be used to describe a machine that takes over when the teacher is absent. (For example: input, output, crank, gears, wheels, motor, joystick, keyboard, modem, disk drive.)

* Have students build a model. This activity works extremely well with construction toys. Alternative materials are small boxes, paper, cardboard, and paper tubes.

* Prior to writing, discuss different features of the various "machines". Students can then write a descriptive paragraph, a story, and even a set of operating instructions.

* Share the stories, and display the "teaching machines"!



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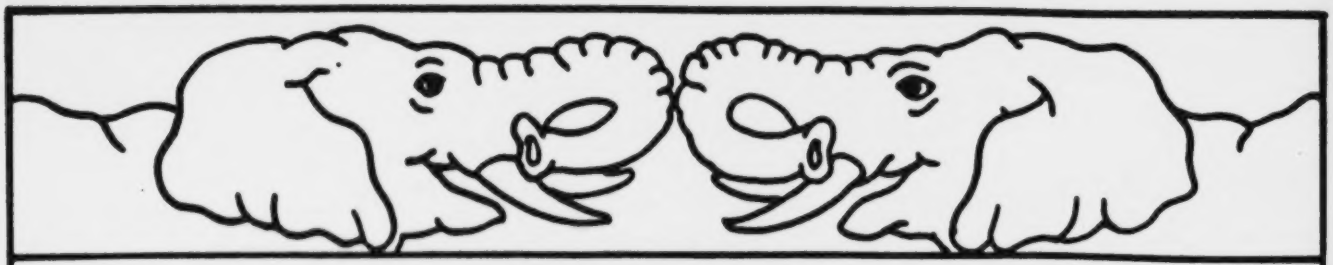

Zoo Friends

* Brainstorm with the students to discuss what animals they might expect to see in a zoo. Include a description of the animal's natural habitat, the type of food it requires, and a description of its physical appearance.

* Have students create a model. The recipe below can be mixed right in the classroom, and can be molded into animal forms. When dry, it can be painted.

* Stories can be written describing "a day in the life" of the animal, a visit to the zoo, or even "the great escape".

* Share the stories. If possible, photograph the animals, and display the photographs on a bulletin board with the stories. After the activity, the animals can really "escape"... right home with the students!

* RECIPE FOR GLUE-BASED DOUGH

  3/4 cup flour
  1/4 cup liquid white glue
  1/4 cup liquid shampoo

  Combine ingredients in bowl.
  Knead, adding more flour if necessary.

From WRITE YOUR OWN STORY COLORING BOOK by Anna Pomanska. Copyright 1979 by Dover Publications. Reprinted by permission of Dover Publications.

EVALUATION DESIGN

The PlayWrite Program focuses on motivating children to write. Written language consists of three attributes of language usage: productivity, correctness, and meaning. Students in the PlayWrite Program were tested for the productivity attribute of written language. According to Torrance, children's fluency, or output, increases with increased interest. Therefore, output, or productivity is an appropriate area for measurement in this study.

The productive component of language refers to the quantity of meaningful units in a written passage. In order for a written passage to convey the thoughts and feelings of the writer, an optimal number of sentences must be generated. Students who are unable to utilize ample sentences to support an idea are considered ineffective writers. Typically, their written work is short, disjointed, fragmentary, and lacking in factual material. Brief sentence productivity significantly affects the general quality of a written product, even though the individual composing the writing may be knowledgeable in other aspects of written language. For this reason, students' sentence production is vital in assessing written expression.

Productivity Measurement (Motivation)

The picture-story section of the Test of Written Language was chosen as the instrument for measuring written composition in this study. It consists of a picture about which a story is written. The picture was selected on the basis of the following criteria: it portrays action of a type that provides as much interest and motivation as possible; it is appealing to children of all ages (from primary through high school); it lends itself to imaginative thinking and is conducive to writing more than what is actually portrayed; and it has a definite foreground and background. The size of the picture is standardized and is large enough to permit continuous viewing.

In the pre and post-testing sessions, students were asked to write a story about the picture. In the post-test, students were permitted to write either the same

or a different story as in the initial test session. Writings were scored according to the number of thought-units expressed.

There are generally two ways to measure productivity. The first is to simply count the number of words written. The number of words written for initial and subsequent sessions provides a gross estimate of whether or not a student is increasing written output.

A more sophisticated approach to measuring production is to count the number of thought-units. A thought-unit is a segment of meaningful expression that contains an identifiable verb and subject and can stand alone. In other words, it is a complete sentence. Incorrect punctuation, spelling, and capitalization are disregarded when counting thought-units.

Attitude Toward Writing Measurement

In addition to measuring written productivity, a semantic differential rating scale was designed to measure attitude toward the subject of writing. Patterned after those used by Osgood, Suci, and Tannenbaum (1957), the semantic differential is based on the viewpoint that subjects have two different types of meaning for individuals: denotative and connotative, which can be rated independently.

Since one can easily state the denotative meaning of a subject but not its connotative meaning, it is possible to measure the connotative meaning through use of bipolar adjectives. Individuals then rate the subject against these adjectives.

By obtaining the subjects' ratings of the subject of writing, the researcher can determine if the attitude toward writing is positive or negative.

The semantic differential rating scale contains three different clusters of adjectives: evaluative, consisting of adjectives such as good or bad, clean or dirty; potency, consisting of adjectives such as strong or weak, large or small; and activity, consisting of adjectives such as active or passive, fast or slow.

Reports on the validity and reliability of the semantic differential scale are satisfactory. Validity studies show correlation coefficients of approximately .80 between the semantic differential ratings and Thurston/Guttman scales. The test-retest reliability is reported at about .90; a result which is satisfactory (Osgood and Suci, 1957).

EVALUATION RESULTS

Measuring productivity (motivation to write) in thought-units, pretest scores on the picture-story subtest of the TOWL ranged from 4 through 13, with a mean score of 6.4. Post-test scores ranged from 8 through 46, with a mean score of 21. Total gains ranged from 1 through 37, with a total mean gain of 14.5.

Describing these results as a percent-growth rate from beginning to end of intervention, the increase in amount written by students ranged from 112% to 760%, with an average of 380%. In the expert opinion of a team of experienced administrators and teachers, this growth far exceeds that of a normal school year and can be deemed educationally significant.

The students' attitudes toward writing were measured using a semantic differential scale at both the beginning and the end of the year. At the end of the year students rated their story writing skills stronger; their stories more interesting; their writing easier and more enjoyable; and the time it took them to begin an assignment decreased. They did not even realize they were writing longer stories!

BIBLIOGRAPHY

Balajthy, E. "Microcomputer Activities Which Encourage The Reading-Writing Connection." ERIC Document No. 274 955.

Bradley, Virginia. "Improving Students' Writing with a Microcomputer." Language Arts, Vol. 59, No. 7, October 1982.

Brannan, K. "Moving the Writing Process Along." Learning, October 1974.

Boruta, M, and Levin, J. "Writing with Computers in Classrooms: You Get Exactly the Right Amount of Space!" Theory Into Practice, Vol. 22, No. 4, 291-295.

Burns, High L. and Culp, George H. "Stimulating Invention in English Composition through Computer-Assisted Instruction." Educational Technology, Vol. 20, August 1980, 5-10.

Burton, R. R. and J. S. Brown. "An Investigation of Computer Coaching for Informal Learning Activities." International Journal of Man-Machine Studies, Vol. 11, 1979, 5-24.

Calkins, L. "Writers Need Readers, Not Robins." Language Arts, Vol. 55, No. 6, September 1978, 704-707.

Cronnell, Bruce. "Using Microcomputers for Classroom Instruction." NIE, March 1981. ERIC Document No. ED 203 872.

Crowhurst, M. "The Writing Workshop: An Experiment in Peer Response to Writing." Language Arts, Vol. 56, No. 7, October 1979, 757-762.

Dickson, P. "Two Students at One Microcomputer." Theory Into Practice, Vol. 22, No. 4, 296-298.

Eisner, E. "Mind as Cultural Achievement." Educational Leadership, Vol. 38, March 1981, 466-471.

Forman, D. "Search of the Literature." The Computing Teacher, January 1982.

Foster, M. "Design in Art and Literature: Drawing Students Into Writing." ERIC Document No. ED 116 212.

Galin, D. "Educating Both Halves of the Brain." Childhood Education, Vol. 53, October 1976, 17-20.

Gazzaniga, M. "Cerebral Dominance Viewed as a Decision System." Hemisphere Function in the Human Brain. New York: Wiley and Sons, 1974.

Gazzaniga, M. "Brain-Corpus Callosum." Journal of Learning Disabilities 8, November 1975, 35-36.

Glassner, B. "Preliminary Report: Hemispheric Relationship in Composing." Journal of Education, Vol. 162, 1980, 74-95.

Goodman, Kenneth. "The Know-More and the Know-Nothing Movement in Reading: A Personal Response." Language Arts, Vol. 56, September 1979, 657-663.

Graves, D. H. "Balance the Basics: Let Them Write." New York: The Ford Foundation, 1978. ERIC Document No. ED 192 364.

Graves, D. H. Writing: Teachers and Children at Work. New Hampshire: Heinemann, 1983.

Guinn, D. "Tinker Toys Are Not Only For Play." ERIC Document No. ED 218 657.

Hennings, D. "Input: Enter the Word Processing Computer." Language Arts, Vol. 58, January 1981, 18-22.

Levin, J. "Microcomputers as Interactive Communication Media: An Interactive Text Interpreter." The Quarterly Newsletter of the Laboratory of Comparative Human Cognition, Vol. 4, 1982, 34-36.

Moffett, James and Wagner, Betty Jane. "Student Centered Language Arts and Reading." Boston: Houghton Mifflin 1976.

Osborn, L. "Writing Families." Instructor, September 1980, 152-155.

Osgood, C. E., Suci, G., and Tannenbaum. The Measurement of Meaning. Urbana: University of Illinois Press, 1957.

Ragosta, M. Educational Testing Service Bulletin. Spring, 1982.

Rubenstein, B. "Making the Private School Grade." New Yorker, October 1986.

Rubin, A. D. "Making Stories, Making Sense." Language Arts, 1980, 285-298.

Searleman, A. "A Review of the Right Hemisphere Linguistic Capabilites." Psychological Bulletin 34, 1977, 503-528.

Sinatra, E. "Brain Research Sheds Light on Language Development." Educational Leadership, Vol. 48, No. 8, 9-12.

Shuy, Roger. "A Holistic View of Language." Research in the Teaching of English, Vol. 15, 1981, 101-111.

Sperry, Roger. "Lateral Specialization of Cerebral Function in the Surgically Separated Hemispheres." The Psychophysiology of Thinking: Studies of Covert Processes. New York: Academic Press, 1973.

Trautman, P. "An Investigation of the Relationship Between Selected Instructional Techniques and Identified Cognitive Style." Ed.D. dissertation, St. John's University, 1979.

U.S. Department of Education. What Works: Research about Teaching and Learning. Washington, D.C.: 1986.

Webster, H. "Kids Helping Kids." Better Homes and Gardens, September 1985.

White, M. "Synthesis of Research on Electronic Learning." Educational Leadership, Vol. 40, No. 8, 13-15.